AR 201-12549612

ROBUST SUMMARY
ALKYL SULFIDE CATETGORY
CAS # 68511-50-2
ENVIRONMENTAL FATE AND PATHWAY ELEMENTS:
BIODEGRADATION

Test Substance	
CAS #	68511-50-2
Chemical Name	1-propene, 2-methyl-, sulfurized
Remarks	This substance is also referred to as methyl propene derivative in HERTG's Test Plan for Alkyl Sulfide Category. For more information on the chemical, see Section 2.0 "Chemical Description of Alkyl Sulfide Category" in HERTG's Test Plan for Alkyl Sulfide Category.
Method	
Method/Guideline followed	OECD 301B, Ready Biodegradability, Modified Sturm Test
Test Type (aerobic/anaerobic)	Aerobic
GLP (Y/N)	Y
Year (Study Performed)	1996
Contact time (units)	28 days
Inoculum	Domestic sewage sludge plus soil

Remarks for test conditions	Inoculum: Sludge from domestic WWTP used at 30 mg dry solids/L; soil from forest area used at 0.1 g/L Conc of test chemical: Test chemical added directly to test vessels at 13.3 mg C/L (28.6 mg/L CAS# 68511-50-2). No preacclimation was used. Temp of incubation: 23 – 24 °C Dosing procedure: Neat test chemical added by micropipettor to culture medium in vessels immediately prior to addition of sewage and soil inocula Sampling: Days 1, 3, 6, 10, 14, 21, 29 (after acidification on d 28) Controls: Yes (blank and positive controls used per guideline); toxicity control not used. Positive Control was Benzoic acid (Na salt) at 20 mg C/L Analytical method: Titration of residual Ba(OH)2 in trapping solution, using HCl Method of calculating measured concentrations: N/A; CO2 evolution and % biodegradation were calculated using the average of duplicate blank-corrected titration volumes at each titration interval Other: • The % biodegradation value reported is slightly inflated by the use of zero titration volume rather than negative volume when corrected for blanks; however, comparison of titration volumes for the test chemical and blank show them to be very similar, so inhibition of inoculum is not suspected.
Results	Not Readily Biodegradable
Degradation % after time	0.3% in 28 days
Kinetic (for sample, positive and negative controls)	$t_{1/2}$ for Positive Control was <10 d
Breakdown Products (Y/N) If yes describe breakdown products	N

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Conclusions	Not Readily Biodegradable; biodegradation was essentially zero
Data Quality	Reliable without restrictions
References	This robust summary was prepared from an unpublished study by an individual member company of the HERTG (the underlying study contains confidential business information).
Other	Updated: 12/29/99